

Not sufficiently explained —

Inaugural Dissertation

on the

Paper March 1828

Medical Properties

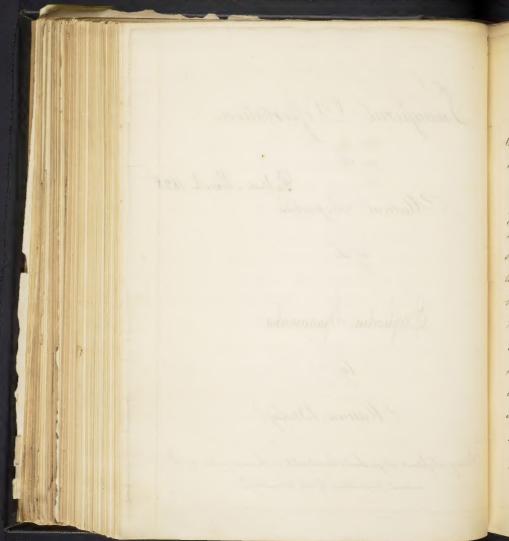
of the

Euphorbia Squarrosa

by

Maurice Perley

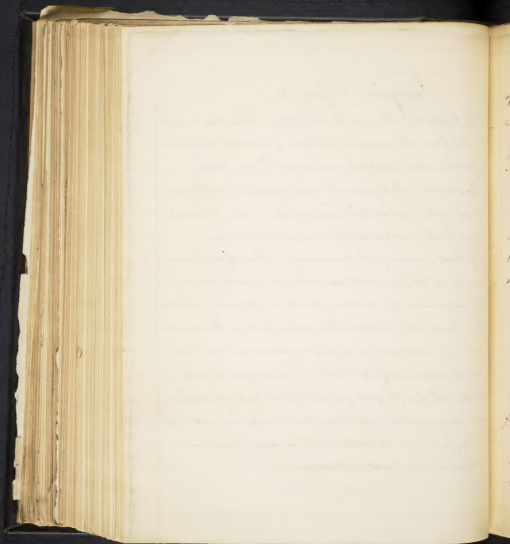
"Every enlightened citizen should be interested in the examination of the
medical productions of his country."



Inaugural Essay &c.

The *Euphorbia Ipecacuanha* is the plant, I have been induced to select from the numerous catalogues of important indigenous vegetables which we possess, as the subject of my thesis.

The prejudice which generally exists against the employment of our native productions, has long been a source of serious regret to the medical profession, as well as to the more enlightened portion of the community. Every effort to subvert the effects of this popular delusion, which so evidently retards the improvement of medicine, should be spontaneously assisted to. Under this impression the practical part of this dissertation will be related with an eye to candour and, not to the superior properties of the plant. I leave for the cases to decide whether the good qualities of this truly amorphous and varying little vegetable, bear a sufficient ratio to its imperfections, to entitle it to a more conspicuous station in the *Materia Medica*...



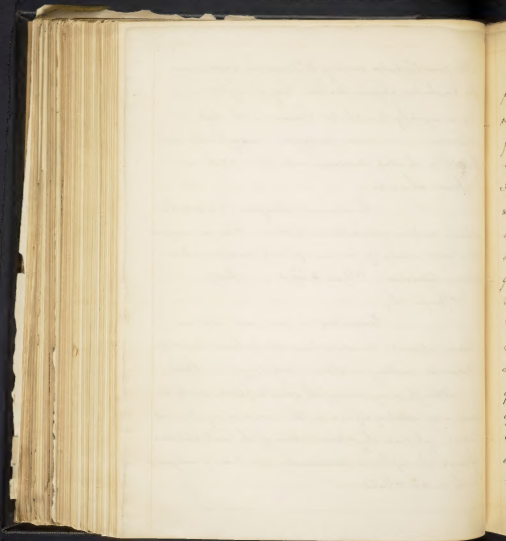
The genus *Euphorbia*, according to Dioscorides, was so named
after Euphorbos, physician to Aida, king of Egypt.
It is arranged by the celebrated Linnaeus in the class
polyandria — and order monogynia; and by Barton and
Nuttall in the class monocla — order monadelphia.
Generic character

Strobilum caliceiform 8 to 10 toothed
alternate denture, glandular or petaloid; Stamens indefinite
12 or more, rarely 16, feminine flowers, central, naked
solitary, stipitated. Style 3-lobed. Nutt.

Specific ch.

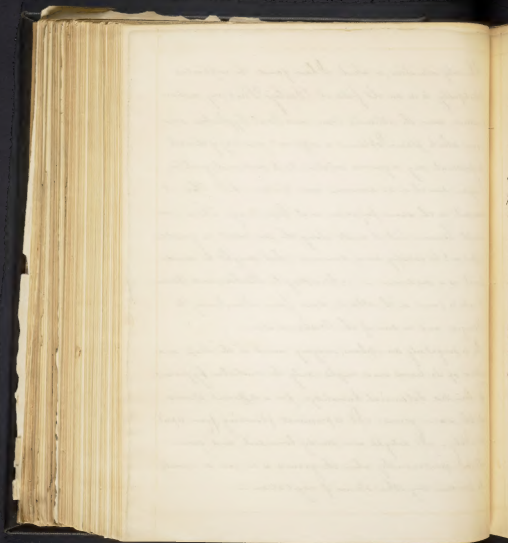
Procumbent or semi-erect, glabrous;
Leaves, opposite, ovate or lanceolate, or linear lanceolate;
Peduncles, axillary or flowered, very long. — Bart.

Although many species of the genus *euphorbia* are to be
found in the deserts of Africa, in China and many parts of
Europe, yet from the representations of the most celebrated
botanists, the *euphorbia speciosa* is exclusively indigenous
to the United States.



The only situation in which I have found the euphorbia
plentifully, is in an old field at Basby's Point, my native
residence, near the Atlantic Ocean and Great Cyprestone river;
from which place I obtained a sufficient quantity of the root,
to prosecute my inquiries relative to its medicinal qualities,
I again saw it in an excursion near Salem N.H. There it
was not in the same profusion as at Cape May. There is no
doubt however but it exists along the sea coast in quantities
sufficient to satisfy every demand that might be made
for it as a medicine. According to Michx. and Benth.
it is to be found in the Atlantic states from New Jersey to
Georgia, and in some of the Western states.

It is singularly amorphous, varying much in the shape and
colour of its leaves, and might easily be mistaken by persons
of limited botanical knowledge, for a different species
of the same genus. It is perennial flowering from April
to July. It delights in a sandy loose soil, and grows
almost spontaneously where the ground is so poor as scarcely
to produce any other species of vegetation.

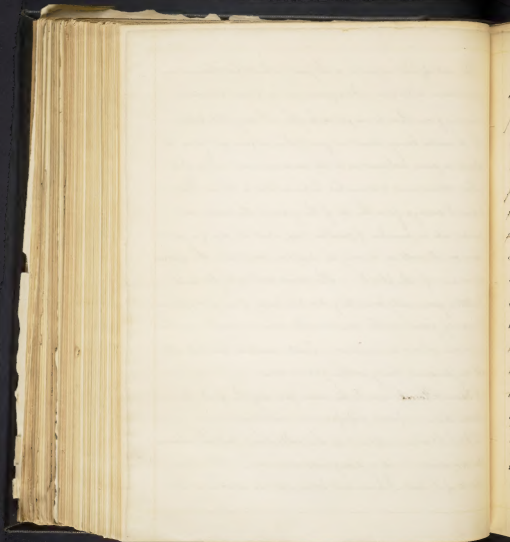


The root of the euphorbia is the part which has claimed my particular attention. It is perennial as before observed varying from three to six feet in length with very little taper; the diameter being almost as great three or four feet from the plant in some instances as at its commencement. It is of a yellow colour, and is somewhat tuberculated in places. Just before it emerges from the top of the ground, the main root divides into a number of smaller ones, about the size of a quill; these small roots on leaving the surface, constitute the external appearance of the plant. The dried root is light and brittle, generally consisting, particularly if an old specimen of woody fibres in the centre. Its colour greyish - rather a cream colour on fracture. Taste, sweetish but not at all unpleasant, being rather farinaceous.

Deacon Storck and Picken were probably the first to observe that one plant possesses an emetic quality.

F. L. Barton notes it in his collections, but he chooses to condemn it as a dangerous remedy. Bigelow speaks of it, but I have not been able to ascertain his

why



conceptus of it as a medicine, & the supposed chemical
composition to be "a substance of the nature of crotonchene;

stable in ether but not in alcohol; & in water it is decomposed."
"In solution it takes the form of something similar to it, cannot
be doubted - one by extraction between the ethers of the milky
juice which renders them the great vegetable medicine in the grass
still it is converted into a substance much allied in its
sensible properties to crotonchene.

A circumstance worthy of remark transpired whilst engaged
in my experiments which gave a measure to prove that the
crude principle exists to a considerable degree in the milky
exudation as well as in the substance of this remarkable
vegetable conductance. Having collected a quantity of the
root for the purpose of examining the effect of my theory previously
to trying it, it was washed in water that it might be cleaned
of the dirt which adhered to it. The water soon turned milky
by the process was poured off and a quantity put up of a
flock of rabbits ears that were stationed along the gutter.
The consequence was in a few minutes afterwards a perfect



expulsion of their noise, violent sickness and vomiting so much
so they were not enabled by their own efforts to regain the
stall. However in a few hours they recovered from their
violent indisposition but took due care to them the diet
which had been the cause of so much excitement in the
first & second stomachs.

It may be that the stier substance was of the tenderer
than any other portion of the plant but not having it was
unable to collect a sufficient quantity of the juice to convert
in a single case. I have not been able to ascertain the part
which would have been so remarkable.

Upon the observation of my father as well as myself domestic
animals generally avoid eating the cotton-wool, except the
sheep which feed on it with avidity and perfect impunity,
licking it down wherever they are allowed to run.

Having detailed though not very minutely or accurately
the botanical description and natural history of the euphorbia
peruviana I shall now make a few experimental observations and
close with its practical application to different kinds of diseases.



Experiment 1st, The first preparation that I made of the sulphur, was a powder of the dried root which I effected by passing the previously pulverized root through a powder sieve constructed for the purpose.

Ex^{pt} 2nd. I next secured a mineral function of the root as follows:

Sulphur root carbon, spruce	℥ij
Good wine	p℥i

Equal quantities being as directed in the Dispensatory and the tinum spiritum distilled and put aside for use.

Expt 3rd. Next ℥ij of the fresh brewed root to one pint of alcohol, to which seven drops concentrated acid was added. It was 24 hrs of contact of a strong acid and root and made.

This function before evaporation was of a pale rose or straw colour which colour was deepened by successive distillations and a dark red tinge of colour to the alcoholic function a greenish tint took place, as the course of a week this preparation gave out fumes of the acid and by the strong again distilled in alcohol to alter the presence of resin.



Structure of galli changes the structure to a solid brown
opaque body. To 5 grs I had dissolved and I added as part
of boiling water, immediately two more washed down the ball
and evaporated: 17.5 grs. of extract was the result.

To the 10.5 grs of extract I added some pure gum arabic solution
until it ceased to be coloured, and upon anything the remainder
I suppose the extract had taken up, 2.5 grs, leaving 13 grs of solid
and equally soluble in water except a small portion of ligneous
matter. The 6.5 grs in the above experiment remaining after
the addition of the alcohol, are doubtless principally gum.

Extractum melle most probably tends to some extent in it;
but not having the proper tools, the assertion. The supposition
in the existence of gelatin, with which the extract is so soon
to abound, inasmuch as I consider myself quite incompetent
to the art of vegetable analysis, I am compelled to assign
this part of the subject without attempting at that accuracy
and length of investigation which it really deserves.

I therefore beg to be excused in not being sufficiently busy
in the chemical examination.



the little opportunity of applying a new medicine to practice
by the student, must be known to every one who has conversed
seriously with the sciences of medicine. However through the
kindness of some physicians Dr. Keckhulst in Harley St. Aldem
St. George, to whose friendship and attention I am greatly
indebted, was enabled to collect the result of several experiments
with the carbonated Acids, most of which were made the

1st subject of immediate discussion. It will appear me to me
established at in several of our, such as the present, (shown
by Dr. Sth) the subject to have 2nd part, and the subject
debated. The 3rd as before in combination with carbon
in order to test its medicinal effect.

The following experiments were instituted especially for the
purpose to collect the new gases, and have been carried
on the circumstances of these business as was more than
as the subject was transferred.



Sept 14 September 21 1824.

After some of the strongest objections were given to Abner Miller and cast into his face, as we are struck of nothing, I returned to my quarters with much distress. She had been previously informed from churchward.

At the time she took it she perceived that no benefit would come from it, yet eight hours during which part of which time she had been unable to give a more sense of infirmities to his case.

Recently she has been conversant with the exhibition of the engraving of her. It had been a matter of a lifetime for her mother, which perhaps would have not without telling. The evening before she had perceived the same of these things.

Her previous delirium was in the end, not without any, although a few others she would not. In doing so, however, after taking the instruction given, I began without much previous notice to come out, but she had several times in an unstable.

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though some wheezing still continued, which however ceased
off in three or four hours. Now on the 26th of the same month
she has not had a return of the disease.

Jan. 24th 1828. It was perfectly gone from cathartics
during the last season.

Feb. 1st 1828. 1st of Feb 1828

Today it all went & returned again, took two grains
; the watery extract in the form of a pill, until she had
taken some stool. It operated twice as in former, and
gave some ease & purged with considerable relief to her
feelings which were highly agitated from the effect of
disordered stomach & gut bowels.

Feb. 1828. On the 18th of Feb. she was affected with
seizures of distent bowels with tension & agony and tenderness
over the epigastrium and right hypochondrium took the
following medicine.

Castor oil 5 grains, given

for 1/2

1/2 ounce of oil of sweet

1/2

Prunella

20 grains of 1/2 ounce of oil





Ex: VI. *Am.* — took better than in some of the cases with the same result as related in case V.

1848. The affluents with the river, within
 last eighteen years of the river, at this place, is not
 not so much as it was some years since. It
 during any part of the year, at least, no more than
 growth of the water, and species, for a short time, the water
 indicates, and in the case of the river, the water is
 state with, and is not, in any of the rivers.

213 1742. 1742. 1742.

4. - yet more young, both in groups, & singly, on the same trees, much elevated with little success, twice upwards, and your line descending -

Est. 220 December 25. I examined bird
3 years old, affected with a bilious complaint of two days
continuance, lost 2 good eggs & a few fresh ones;
it was without effect. Right and left breast swollen & I
took 4 good po. in the forenoon, with 2's of Calomel
in the p.m. in small quantities at the same time.



Two hours after this I had one large evacuation from
the bowels, attended but not preceded by pain.

Feb 8. Sat. 1827. - Same used 25 grains of opium
with an intermittent watch but relieved at last five drops.
The evacuation of pain over me was not at the pit
of the stomach. He took 50 grains of the powder sulphur
before, & produced very little manure and in the course of
four hours afterwards it elevated three or four times on
his bowels. This patient had taken 90 drops of liniment
about an hour before the cathartics.

Feb 9. Sun. 1827. - Same a black boy aged 12 years
laboured under some flat fever with occasional delirium.
The complexion of his face at the stomach, bowels bound.
When we directed him 10 grains of opium with 10 grains
of powder sulphur early in the evening. He moved some
manure through the night and in the morning elevated
with considerable energy some 10 grains.





the attention of students even when location and arrangements
might enable them to set forth by publication in a place of
to some light; the more so, as it is particularly serious at this
junction to send them wandering off to seek, that will multiply the place
of our culture, and the more so, as it is the place, you know
will receive a trust, it is at the present period, rendering
it for being liable to distraction.

Contents of the Catalogue is what I have not called this
article from, protected all health and consequent mobility to it
when, or even to the point of the condition of all the bodies.
I will maintain in the course of the work

in case one test

it is enough to show the culture and the test.

I do not, as I always do, expect you to return any
gratitude or acknowledgments to each and all of you, the students
of the medical department, the students of the University
for the most interesting and practical information. I have received
from your letters in the "Journal of the University."

Some have been published in the "Journal of the University."







